



UNIVERSITI SAINS ISLAM MALAYSIA

جامعة العلوم الإسلامية الماليزية  
ISLAMIC SCIENCE UNIVERSITY OF MALAYSIA



# FACULTY OF SCIENCE AND TECHNOLOGY



## **CONTENTS**

Welcome to FST

Why study at FST?

Career prospects

Degree Courses

Your study experience at USIM

Application and Admission

Contact Us

A large, multi-story building with a yellow and orange facade, featuring large windows and a prominent central tower. The building is the Faculty of Science and Technology (FST) at USIM.

# **WELCOME** TO **FACULTY OF SCIENCE AND TECHNOLOGY**



Faculty of Science and Technology ("FST") was established on 1st December 2003. Its pioneer programme was Bachelor of Science with Honours (Food Biotechnology) with an intake of 43 students for the 2004/2005 session. This pioneer group of students has graduated in 2008.

In the session of 2005/2006, FST offered programmes for Bachelor of Science with Honours (Actuarial Science and Risk Management) and Bachelor of Science with Honours (Information Security & Assurance). In the session of 2006/2007, Bachelor of Science with Honours (Financial Mathematics) was introduced in FST. In the session of 2008/2009, Bachelor of Science with Honours (Applied Physics) and Bachelor of Science with Honours (Industrial Chemical Technology) were introduced in FST. And in the new session of 2012/2013, Bachelor of Architecture with Honours is now being offered in FST and the latest Bachelor of Engineering with Honours (Electronics Engineering) will be introduced in this session 2014/2015.

A variety of self developmental programmes are conducted continuously for the students soft skills ability to function in the real world. Amongst the programmes conducted by FST are New Product Introduction Day, Islamic Innovation Expo (i-NOVA), Young Scientist Assembly, USIM Student Innovation Competition (SIC), industrial visits and etc. FST also provides opportunities for international exposure in teaching and learning of other foreign universities in Singapore, Australia and South Korea.

FST is proud of its students who have made the university proud by winning many academic and co-curricular activities awards that were organised by the university and external parties. It also has produced an alumni that is currently serving in the public and private sectors of the country. This is a challenge for the new FST students to uphold the faculty's excellence in the years to come ahead.



### MOHD SAFWAN HAMDY

---

*"The four-year program of Actuarial Science & Risk Management is very comprehensive because it equips me with better knowledge and skills to be a good actuary, risk manager, financial analyst, fund managers and others. Besides, the program is very unique in the sense that it incorporates the elements of Naqli and Aqli knowledge in the curriculum structure."*

### RIZA ASMA SAARI

---

*"As a student of the Industrial Chemistry Technology programme, i always ensure that my research is related to the ultimate source in Islam, the Quran. For example, in my final year research project which is based on the water purification technology, i connected the framework of my study to the the 25th surah of the Qur'an, Al Furqan."*







# WHY STUDY AT

## FACULTY OF SCIENCE AND TECHNOLOGY

### The Integration of Naqli and Aqli Knowledge

Faculty of Science and Technology (FST) is the largest faculty in USIM offers eight programs of studies with specialization in applied science, at both undergraduate and postgraduate levels. FST offers broad-based degree programs, at both, that integrate Islamic foundations with contemporary knowledge and practices. The students will not only explore the science of their choices and chance to gain knowledge in other various fields of science social sciences, but also creative and trustworthy in discharging their duties as Muslim professionals.

In general FST offers undergraduate programme package that allows its graduates to be competitive and able to face the working world in various fields and meet the challenges of the new millennium. FST focuses on courses and curricular activities that are relevant to the industry's requirement. FST also has expertise in virtually all areas of science that makes learning applied science in the FST.

Postgraduate students are given the opportunity to follow and to carry out various research and supervised by the FST academic members. FST inspires advances in research to generate new knowledge and scientific discoveries that can be used in the development of the country.

### Innovative Teaching and Learning

Dynamic changes in the global and regional economy have taken place that has impacted the society in a massive way. Such changes are seen as the driver for faculty members to be innovative in teaching and learning activities as well as provide direction for researchable areas. Novel and invaluable research outcome are always emphasized by academics in fulfilling the national agenda of transforming Malaysia into the region's Islamic Finance Hub.

# GREAT CAREER PROSPECT

Our high program standards ensure graduates are respected by both local and international employers. They also have the potential of obtaining and building a fulfilling career through continuous development of skills and knowledge that can be acquired throughout their career.

Many of graduates from FST proceed straight into wide-ranging career prospect in various positions in Science and Technology industries such as :

These organizations regard the programme as parallel to the current needs of management and administration with language skills and expertise.

- **Bachelor of Science with Honours (Food Biotechnology)**

**Credit hours: 128**

**Program lengths: 4 years**

Food biotechnologists use the laws of science and biotechnology to produce, process, evaluate, package, and distribute foods. Food biotechnologists may concentrate on basic research, product development, quality control, processing, packaging, labelling, technical sales, or market research. Food biotechnologists may develop ways to process, preserve, package, or store food, according to industry and government specifications and regulations. They may work in production or technical management. They check on food standards, laws, and safety. They look into sanitation, water supply, and waste management.

- **Bachelor of Science with Honours (Actuarial Science and Risk Management)**

**Credit hours: 131**

**Program length: 4 years duration**

Include, but not limited to, industries such as the takaful industry, insurance, the financial industry, banking, securities, brokerage, trust, investment, the health industry, medicine, pharmacy, the telecommunications industry, consultation, accounting Industry, marketing Industry, transportation industry (land, sea, air), public and private educational institutions.

- **Bachelor of Science Computer with Honours (Information and Security Assurance)**

**Credit hours: 130 credit hours**

**Program length: 4 years duration**

Positions include, but not limited to, database administrator, games developer, Information systems manager, IT consultant, Multimedia programmer, Network engineer, Systems analyst, Systems developer. Also computer scientist can work as Geographical information systems officer, IT sales professional, IT trainer, Secondary school teacher, Technical author, IT consultancies and IT service providers.

- **Bachelor of Science with Honours (Financial Mathematics)**

**Credit hours: 132 credit hours**

**Program length: 4 years duration)**

Include, but not limited to, sectors such as financial, banking, takaful and insurance industry, broker and securities companies, fund management, waqaf management and unit trusts, other private financial organisations, Islamic economics institution such as Tabung Haji, Yayasan Pembangunan Ekonomi Islam Malaysia (YAPEIM), Pusat Pungutan Zakat (PPZ).



- **Bachelor of Science with Honours (Applied Physics)**

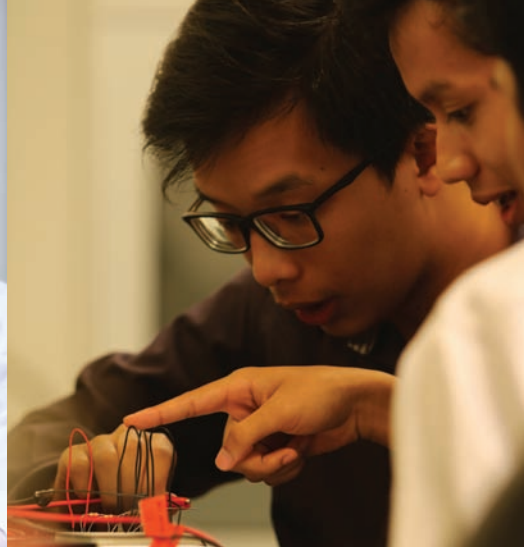
- **Credit hours: 131 credit hours**  
**Program length: 4 years duration**

Potential careers in applied physics in a number of smaller fields. The study of materials has made possible revolutionary breakthroughs in a number of engineering fields, such as transistors, semiconductor-based lasers, and fiber-optic communication devices. These areas of study are often integrated with allied disciplines such as electrical engineering, engineering material science, inorganic and organic chemistry, and biology.

- **Bachelor of Science with Honours (Industrial Chemical Technology)**

- **Credit hours: 129 credit hours**  
**Program length: 4 years duration**

Positions include, Analytical Chemist, Chemical Engineer, Research Scientist, Science writer, Researcher, biochemist, toxicologist, environmental chemist, material scientist, nuclear scientist, forensic scientist & consultant, forensic image specialist, crystallographers, crime scene investigator, formulation chemist, colour chemist, health officer, process chemist, drug designer, marine chemist, petroleum chemist.



- **Bachelor of Science Architecture with Honours**

- **Credit hours: 122 credit hours**  
**Program length: 3 years duration**

Architectural sectors such as, but not limited to, private sectors (project architect, design architect, photographer, videographer, developer, project manager), government sectors (architect JKR) and local authority (DBKL, MBSA & etc).

- **Bachelor of Engineering with Honours (Electronics Engineering)**

- **Credit hours: 132 credit hours**  
**Program length: 4 years duration**

Engineering industries such as, but not limited to, telecommunication, software, electronic and information technology, multimedia communication, manufacturing, educational, research, broadcasting and entrepreneur industry.



## ADMISSION REQUIREMENTS FOR THE UNDERGRADUATE STUDIES

### FOR GCE 'A' LEVEL / STPM/ STAM HOLDERS OR EQUIVALENT

**A pass at the SPM/ GCE 'O' Level or equivalent with at least :**

- STPM / STAM / GCE 'A' Level or equivalent and recognized by USIM Senate; and At least CGPA 2.00 or equivalent; or Jayyid and above or equivalent; and
- Credit in English Language subject at least at 'O' Level degree; AND
- Fluent in English Language equivalent to MUET Band 2 and above; or IELTS Band 4.0 and above or obtained 510 score (PBT)/180 score (CBT)/64 score (IBT) and above in TOEFL or any equivalent tests proficiency recognized by USIM Senate; and
- A credit in Arabic Communication and Language / Higher Arabic Language or equivalents; and
- Credit in ONE (1) subject relating to Islamic Studies; and
- Credit in at least ONE (1) subject relating to the program applied (based on the special requirement of the program applied); and
- Financial statement / scholarship statement to USIM.

### FOR MATRICULATION HOLDER OR EQUIVALENTS

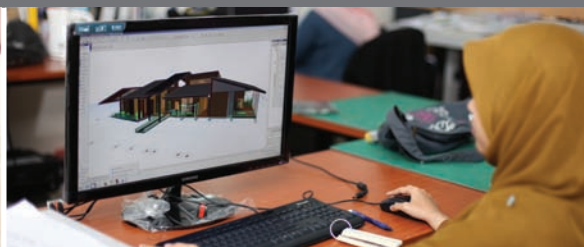
**A pass at the SPM/ GCE 'O' Level or equivalent with at least :**

- Matriculation / Diploma Certificate or equivalent and recognized by USIM Senate; and
- At least 2.50 CGPA and above for Diploma graduate; or
- At least 2.00 CGPA and above for Matriculation graduate; and
- Credit in English Language subject at least at 'O' Level degree; AND
- Fluent in English Language equivalent to MUET Band 2 and above; or IELTS Band 4.0 and above or obtained 510 score (PBT)/180 score (CBT)/64 score (IBT) and above in TOEFL or any equivalent tests proficiency recognized by USIM Senate; and
- A credit in Arabic Communication and Language / Higher Arabic Language or equivalents; and
- Credit in ONE (1) subject related to Islamic Studies; and
- Credit in at least ONE (1) subject related to the program applied (based on the special requirement of the program applied); and Financial statement / scholarship statement to USIM.

### NOTES:

STPM	Malaysian Higher School Certificate
STAM	Malaysian Higher Religious Certificate
PNGK	Cumulative Grade Point Average
USIM	Universiti Sains Islam Malaysia
TOEFL	Test of English as A Foreign Language
IELTS	International English Language Testing System
MUET	Malaysian University English Test

Visit <http://bpa.usim.edu.my> for faculty requirements for undergraduate degree programmes





# GRADUATE PROGRAMME

Faculty of Science and Technology offers PhD and master programmes in the areas of Food Biotechnology, Actuarial Science and Risk Management, Information Security and Assurance, Financial Mathematics, Applied Physics, Industrial Chemical Technology, Architecture and Electronic Engineering. All will have emphasis on Islamic principles. These are done under the following nine programs;

For full details on the graduate programmes including admission processes and fee structures, please visit <http://cgs.usim.edu.my/en>

## POSTGRADUATE PROGRAMMES

By Coursework

PhD in Science (by Research)

Master of Science (by Research)

Master of Science (Food Biotechnology) via Mixed Mode

Master of Computer Science (Information Security and Assurance) via Mixed Mode

Master of Science (Financial Mathematics) via Mixed Mode

Master of Science (Actuarial Science) via Mixed Mode

Master of Science (Risk Management) via Mixed Mode

Master in Information Technology (Enterprise Informatics) via Mixed Mode

Master of Computer Science (Intelligent System Technology) via Mixed Mode



## ADMISSION REQUIREMENTS FOR THE GRADUATE STUDIES

### MASTER DEGREE

- Suitable Bachelor's degree with Honors and CGPA greater or equal to 2.75 from USIM; or
- Suitable Bachelor's degree with Honors CGPA greater or equal to 2.75 from another institution of higher learning recognized by the Senate; or
- Other qualifications equivalent to a Bachelor degree and relevant professional experience recognized by the Senate.

### DOCTORATE/DOCTOR OF PHILOSOPHY DEGREE

- Suitable Master's degree with good grades from USIM; or
- Suitable Master's degree with good grades from another institution of higher learning recognised by the Senate; or
- Other qualifications equivalent to a Master degree and relevant professional experience that is recognised by the Senate; or
- Master degree candidates that are recommended by the Graduates Studies Committee to convert their study to Doctoral programme with the Senate's approval.

# YOUR STUDY EXPERIENCE

FST is completed with various facilities designed for research and teaching. Besides access to the university facilities such as libraries, the main facilities of the faculty are the conference rooms, computer labs, lecture Hall and mini studio room.

We are continually investing in our grounds, buildings and facilities to ensure that you have only the best surroundings in which to live and study.

We are proud of our 254 hectares university campus, which is strategically situated at Bandar Baru, Nilai, Negeri Sembilan approximately 20 minutes by car from the Kuala Lumpur international airport and 40 minutes' drive to downtown Kuala Lumpur.

The USIM Chancellery building is one of the iconic landmarks of the University. This building is inspired by Islamic architectures, with onions-shaped dome as its most highlighted features. From the bird's eye view, the building which consists of three building complexes forms the letter 'U' and facing towards the sacred house of the Kaaba in Mecca.



## Global Open Access Learning System

At USIM, you will benefit from access to the GOALS (Global Open Access Learning System), which is a comprehensive and flexible e-learning platform that is designed to provide students and lecturers with a single dashboard that integrate information, administration, teaching & learning, communication and support services. GOALS provide a seamless growth path from the basic function of delivering online courses, to the creation and administration of online communities right up to the management of teaching and learning for the entire online campuses.

## Soft Skills

As a USIM student, you will be part of the university vision to produce graduates who possess noble values. Besides university and program courses, there are diversity curriculum courses which are focused on developing major soft skills, namely Communication, Critical Thinking and Problem Solving, Teamwork, Learning and Information Management, Entrepreneurial Skills, Professional Ethics and Moral and Leadership Skills. These courses provide spaces for acquiring knowledge and skills through experiential and practical learning. There are three core programs, namely VOLUNTEERISM, CULTURE and SPORTS



# APPLICATION AND ADMISSION

We are looking for students who possess positive attitudes, active, who have the ability and motivation to benefit from our courses and who will make a valued contribution to the faculty and the university. We welcome applications from all over the world and it is our aim to make the process as seamless as possible.

For full details on the programs we offer and detailed entrance requirements, visit  
**<http://fst.usim.edu.my>**

For Malaysian candidates, applications for full-time undergraduate study are made via  
**<http://upu.mohe.gov.my>**

For international candidates, the full details of entrance requirements, application processes and fees for undergraduate programs are available at :  
**<http://bpa.usim.edu.my/en/studies-info/international-student>**

For full details on the graduate programs, including admission processes and fee structures, visit  
**<http://cgs.usim.edu.my/en>**



### **Visiting us**

If you wish to make an informal visit to USIM prior to applying here, you are welcome to do so. Please contact us in advance if you wish to visit the department and we will do our best to assist

### **Contact us**

#### **FACULTY OF SCIENCE AND TECHNOLOGY**

Universiti Sains Islam Malaysia

Bandar Baru Nilai, Nilai

71800, NEGERI SEMBILAN

Tel : +606-798 6510 / 6511 / 6512

Fax : +606-798 6566 / 6516

For international student enquiries, please contact:

USIM 'Alamiyyah (International Centre),

Universiti Sains Islam Malaysia

Bandar Baru Nilai, 71800, Nilai,

Negeri Sembilan, MALAYSIA

Tel : +606-797-8630 / 8652

Fax : +606-797-8650

Email : [alamiyyah@usim.edu.my](mailto:alamiyyah@usim.edu.my)

You can also follow us through our social media channels, all of which can be accessed via <http://www.usim.edu.my/en>